

# AMERICAN BEE JOURNAL



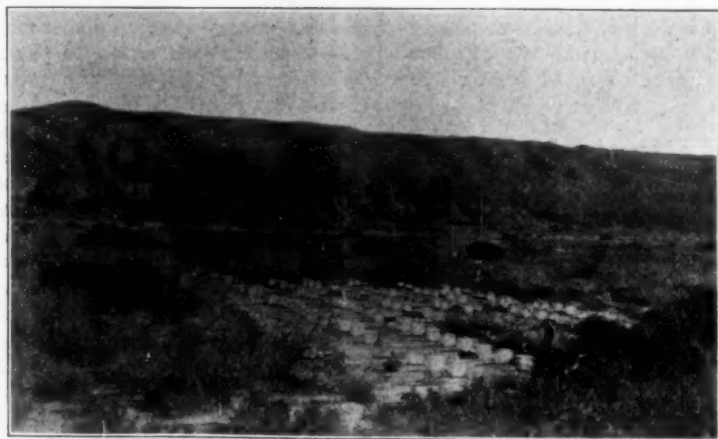
AMERICAN  
BEE JOURNAL  
COLLEGE

GEORGE W. YORK,  
Editor.

CHICAGO, ILL., APRIL 24, 1902.

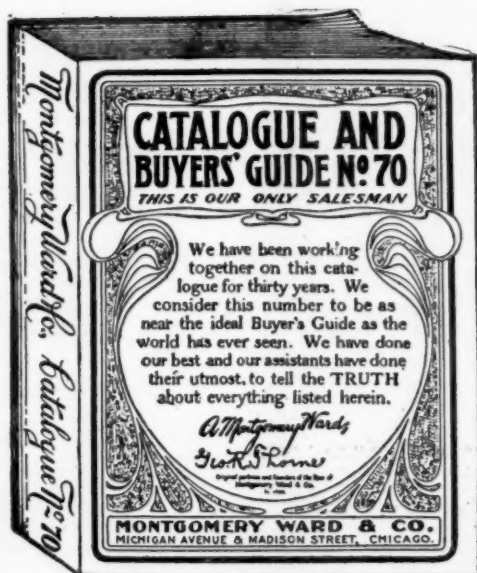
FORTY-SECOND YEAR  
No. 17.

WEEKLY



APIARY OF ALBERT ROZELL, OF LOS ANGELES CO., CALIF.  
—(See page 268.)

# Know What Your Dealer Pays



THIS BOOK CONTAINS  
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**17,000 PICTURES**  
**1,000 PAGES**

This book tells pretty nearly what your dealer pays for everything. It quotes wholesale prices on 70,000 articles, and shows pictures of 17,000 of them. It includes practically everything that anybody uses, wears or eats; and its prices are the lowest ever quoted. It will save the average family at least \$100 per year—some \$500. Two million people send for this book yearly as a buying guide, and we want you to have one too.

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# AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 THE OLDEST BEE-PAPER IN AMERICA

42d YEAR.

CHICAGO, ILL., APRIL 24, 1902.

No. 17.

## Editorial.

**Quoting the Honey Market.**—An editorial on page 195 has called forth the following:

EDITOR AMERICAN BEE JOURNAL.—

Dear Sir:—Referring to "Quoting the Honey Market"—editorial page, 27th inst.—"It is better to quote a cent lower rather than a cent above," etc. Our Great Teacher said that our conversation should be yea, yea, and nay, nay. "The truth is mighty, and will prevail," although all the commission men come to your rescue. Don't make a fight on that.

Yours truly,

C. C. PARSONS.

The fact that a lower quotation than the market leads to less trouble than a higher quotation is by no means an argument that either one is as good as a correct quotation; and at this end of the line there is implicit confidence that it is the wise thing to obey the precepts of the Great Teacher. So it has constantly been the effort to tell "the truth, the whole truth, and nothing but the truth."

One of those things that no one with an editorial experience will be likely to label as belonging in the list of things so easy to be done that they do themselves, is the matter of pleasing everybody, and especially is this true with regard to the matter of market quotations. There are those that believe it would be better to have no market quotations whatever; but it is not likely that this number is very large; and a conviction that by far the greater number of bee-keepers desire to have such quotations continued has been the warrant for their continuance.

Again, the opinion has been expressed that it would be better to give the price of comb honey and omit that of extracted; and it is possible that the exact opposite of this opinion may be entertained.

Neither does the foregoing complete the list of dissenting views, as witness the following:

MR. EDITOR:—Why do you print in the honey and beeswax market quotations the name of one firm in each city? If it is meant as an advertisement of that firm, and you get pay for that advertising, I have nothing to say. But I do not see the sense in taking up room with the names otherwise. It hardly seems the fair thing to others in the same place equally trustworthy, even if they do not do so large a business; and if it is a matter of free favor, should you not favor the weak rather than the strong? I have looked through my daily, which has one page pretty well filled with market quotations of nearly every commodity under the sun, and I do not find the name given of the man who sells hides, or of the one who sells butter, or onions, or anything else. Of course, you

ought to know your own business, but I thought it would do no harm to tell you how things look to others. HONEY-PRODUCER.

Not entirely in agreement with this is the view that a full list of dealers or commission men should be given.

Does it not appear pretty clear that these diverging views can not easily be all carried out at the same time? There is a large capacity for the reception of advice at this office, and further installments of that article will be cheerfully received. But please don't insist on it that we must follow all that is supplied.

A little later we expect to publish the views of the commission men on the subject of quoting the honey market. Then there'll be some interesting reading for "Rip Van Winkle," as well as others.

**Traite Pratique Pour L'Elevage De Reines** (Practical Treatise on Queen-Rearing), is the title of a little work of 90 pages just issued by Giraud-Pabou & Fils, in France. It gives the latest methods in use in this country, for which it seems desirous to give full credit (unless it be in the case of Pridgen's nursery and West's cell-protector), and gives especial credit to "Doolittle's magnificent work"—"Scientific Queen-Rearing."

**Tarred Paper as a Winter Covering.**—After another winter's trial of black tarred paper tacked or tied about hives, Arthur C. Miller says in the American Bee-Keeper:

In the matter of warmth I find that the wrapping of tarred paper about single-walled hives continues to work most satisfactorily. During the past winter I have had seven colonies so protected, and they are now in prime condition. The black surface of the paper absorbs the sun's rays, and the hives are warmed through and through, and yet the bees do not seem to fly abnormally or in unseasonable weather.

**The Proper Naming of Swarms** is a matter not without its difficulties. Take just the three terms—prime swarm, first swarm, and second swarm. Very likely nine out of ten will say, "A prime swarm is just the same as a first swarm—the swarm that issues first in the season from any given colony; and a second swarm is the next one that issues after the prime or first swarm."

That looks simple and easy enough, and it would be so if nothing but the time of issuing were ever taken into consideration. But the same man who gave the foregoing answer will say, "A first swarm has a laying queen, and a second swarm has a virgin." Then comes a colony which by some means has lost its laying queen, and the first time it sends out a

swarm there is a virgin queen with the swarm. According to the first statement it is a first swarm, according to the second statement it is a second swarm. Dadant's "Langstroth" speaks of a prime or primary swarm with a young or virgin queen. Root's "A B C of Bee-Culture" says that a swarm with a virgin queen is an after-swarm.

The only object of the present paragraphs is to call attention to the confusion of terms, in the hope that in some way the matter may be straightened out.

**Black and White Hives.**—At the Chicago convention Secretary Moore said that to satisfy his desires a hive should be painted at least twice a year—white at the coming of hot weather in summer, so as to keep the hive cool, and black when cold weather comes in the fall so as to attract the rays of the sun. He has held that opinion for some time, and no one has objected to the desirability of such a thing, but it did not seem an easy thing to accomplish. Now that Arthur C. Miller seems to have made a success of using black tarred paper as a winter wrapping for hives, there seems nothing in the way of his at least trying the plan of white and black.

**Sugar for Bees.**—An interesting discussion as to the right kind of sugar for bees is published in Gleanings in Bee-Culture, in which W. K. Morrison contends that beet-sugar is unsuitable for bees, and Melvin R. Gilmore contends that there is no difference whatever between refined cane-sugar and refined beet-sugar. It is somewhat hard to decide which has the better of the argument. So long as all agree that cane is at least as good as beet-sugar, it might seem the part of wisdom to prefer the cane. Unfortunately for the possibility of carrying that out, we are told that by far the larger portion of sugar on the market is beet, and no one can tell one kind from the other.

**Excluders Under Section-Supers.**—Some say they are not needed, while others say that without them the queen will go up and lay in the sections. This difference of opinion may result from difference in conditions. With plenty of room below there is little inducement for the queen to go above to lay. Yet with plenty of room below, if there is no drone-comb in the lower story, and room for it above, the workers will be likely to build drone-comb above, and the queen will be likely to use it. If the sections are filled with foundation, so that no drone-comb can be built above, the cases will probably be rare in which the queen will go above. If small starters are used in sections, with no drone-comb below, it will be a safe thing to use a queen-excluder.

## Convention Proceedings.

### The Chicago Convention.

#### Report of the Semi-Annual Convention of the Chicago Bee-Keepers' Association, Held Dec. 5, 1901.

BY A SHORTHAND REPORTER.

(Continued from page 246.)

##### DEPTH OF FRAMES FOR WINTERING.

"Do bees winter better on frames deeper than the Langstroth frames?"

Pres. York—How many think that bees winter better on frames deeper than the Langstroth? Five think so, and I suppose the rest don't think so, or perhaps don't think at all.

Dr. Miller—I haven't a preference.

Mr. Dadant—I prefer deeper frames than the Langstroth because there is more honey over the cluster. They tell us that the bees can work as well back as up. They can't have it warm enough. I have seen bees starved to death many a time with honey on the side. I don't think anybody ever saw bees starve to death, or freeze to death, with honey above them. I suppose others, as well as I, have seen the bees starve to death with honey just a little over on the side.

Pres. York—It often is too cold for bees to move sideways in the hive, but the heat going up, they can go up.

Mr. Baldridge—If you have two sets of six-inch or shallow frames, you have the same as a top hive with twelve-inch frames. In fact, you have a better hive for wintering, because there is a space between the two sets that will enable them to pass; but if in the cellar, it makes no difference how shallow, they will reach the honey if it is in the hive, if you keep it as warm as I keep mine, 40 or 50 degrees.

Mr. Riker—My experience is that the best wintering is in the Langstroth frame. I suppose Mr. Dadant's frames are a little deeper than the Langstroth.

Mr. Dadant—A little over two inches deeper.

Mr. Riker—But with the Langstroth frame properly filled with honey, it will take any colony of bees through the winter, properly protected. I put 100 colonies in proper condition, and all will come out unless they become queenless, not on account of the frames not being right depth.

##### RACE OF BEES FOR COMB HONEY.

"What race of bees would you recommend for comb-honey producers?"

Pres. York—How many would recommend the Italian bees? Fourteen.

Pres. York—How many would recommend Carniolan bees?

A Member—I don't know anything about them.

Pres. York—How many would recommend black bees for comb honey? One.

##### LONGEVITY OF BEES.

"What is the cause of longer or shorter lives of worker-bees?"

Dr. Miller—Work.

Mr. Dadant—Outdoor work.

Mr. Riker—I would think it was the proper manner that the queen was reared. I have had a little experience in that line. Some queens are reared according to Nature. I never have known queens reared that way but what would produce good, long-lived bees. I have known queens reared otherwise than in accordance with Nature that would live 20, 30, 60 days; the result was, it took the queen all her time, that is, the colony wouldn't increase. The bees would die as fast as she would lay eggs to produce bees, where, on the other hand, bees would be three or four generations in one hive.

Mr. Dadant—What do you mean by three or four generations?

Mr. Riker—Three or four sets of bees—three or four months. The queen will lay eggs for three or four months and all those bees would be retained in the hive. I have had queens that would produce bees that would live from the first of September until the first of June—good, strong colonies without the queen in that hive.

Mr. Dadant—Suppose you took those first bees on the first

of May instead of September, how long would they live? Suppose you introduced a queen of another color, how long would those bees live?

Mr. Riker—The first of April I have taken queens from bees, and the first of December I had good colonies yet, almost as strong. Same color. Remove the queen.

Mr. Dadant—Those bees didn't go out to the field. If you put another queen in, that's the way to test that. Take black bees.

Mr. Riker—The best way to test them is to remove them entirely.

Mr. Dadant—Those bees will not go out, because they are discouraged, and they will sit in the hive. Those same bees, if they have a live queen, in less than three months will all disappear. Has any one else ever tried changing from blacks to Italians, and from Italians to blacks?

Three voted.

Mr. Dadant—How long was it before all the bees had disappeared?

Mr. Riker—Well, with me, I have tested it that way. I have tested it by taking the queen from the colony. I have tested it by taking in the fall and putting in again in the spring. That seems to me to be about the fairest way to test the life of the worker-bee. I have taken other queens and in three months from the time I have removed the queen from the hive the old bees would be gone. Those are queens that would rear bees that are short-lived. Take a long-lived queen, and she rears long-lived bees. They always have a good, strong colony. I have never known it to miss. But take the other queens, that rear bees that are short-lived, and you always get a weak lot—invariably they will be weak. One queen need not be any more prolific than the other, but the long-lived bees will be the stronger.

##### COMB HONEY BY THE CASE OR POUND—WHICH?

"Should comb honey be sold wholesale by the case or by the pound?"

Mr. Burnett—I would like to have an expression from some one else first, but I certainly have bought and sold some honey in the last 25 years, and I have yet to buy the first package by the case; so that answers a multitude of questions, perhaps, on that side. I never could understand how, where I had to dispose of these goods again in ordinary methods that are now in vogue, of exchanging merchandise for money, the question of bother being altogether obsolete with us; but I can understand that where a party has produced some honey, and for so many pieces of honey can exchange it for what he wants in some other merchandise—and perhaps in that case, where both parties know exactly what they are doing, every piece of comb being visible to the purchaser, that a fair understanding can be had; but where honey is to be handled in any quantity, and where we must send to buyers who cannot examine the goods until it reaches them, we must know, it seems to me, what the weight of the merchandise is. There is no way of satisfying all parties concerned like records, and if we have those records—the weights—the number of sections in a package—it is difficult for a misunderstanding to arise from that standpoint. But, if we send a package of honey of so many cases, we don't know the weight of that package, either gross, tare or net, it is liable to disappoint the buyer. For instance, it contains 24 sections, his understanding having been that 24 sections meant 24 pounds. As a matter of fact, it may weigh 15, 16 or 20 pounds, or it may weigh 25 or 28. I am at a loss to understand, really, why there should have been as much business done as there seems to have been done in the last two or three years in selling honey by the case, unweighed. Of course, we have found that parties have bought it that way and have been satisfied, and others have bought it that way and are not satisfied.

Mr. Dunn—Isn't it optional with the merchants of South Water street to sell by the case if they want to sell by the case? There is no question that honey has been sold by the case there; that can't be denied.

Mr. Burnett—We never have sold it.

Mr. Dunn—Then you haven't been using the same concessions other men have been using.

Dr. Miller—I know that Mr. Burnett has sold hundreds and hundreds of cases by the case. Of course he took the weight of it!

Mr. Dunn—Is there one house that controls this market, that can make or break it? I have sold honey two cents a pound higher than I could find anywhere on the market, and I want to say that the quotations in the bee-papers are not always correct. They are behind the times generally two or three weeks, and that's not right to the men that deal in honey.



Mr. Horstmann—I believe honey should be sold by the pound. I don't believe there is any fair way except by the pound. There are a great many different sizes of sections. As to the commission man, I don't care how he disposes of it—by the case or pound—but I think in order to be fair all around, we must sell by the pound when we sell it wholesale.

Pres. York—That's the question.

Mr. Moore—In my experience I have seen sections weighing 10 ounces, and some weighing 20 ounces. As long as the variation is a possible one ounce, which means considerable on a case of 24 sections, it is too far off to sell honey by the case in a general way.

Pres. York—How many are there who sell comb honey through the dealers? Nine. Referring to the market quotations, I rely upon Mr. Burnett to keep me posted for the Chicago market. Mr. Dunn has criticised the quotations published in the American Bee Journal. I want to refer the matter to Mr. Burnett to explain to us whether it is necessary to correct the quotations every day or two, and whether we can rely upon his quotations.

Mr. Dunn—I notice that those quotations are generally two, three and four weeks behind. That's not a fair quotation.

Pres. York—What do you mean by "behind?"

Mr. Dunn—In date. The market 20 days ago is no criterion today. I claim that reports ought to be prompt and up to the publication. We should not have the reports late. Now, then, those reports are what govern the whole country. We find reports from New York three weeks late, and four weeks late, and from Cincinnati. I claim they should as nearly as possible be up to date of the publication.

Pres. York—Do you mean we ought to change the date of them, or change the figures?

Mr. Dunn—No, sir, I want a correct report, actual, as it is. I don't think, sir, with all due respect, that Mr. Burnett should have the say to fix the market, or any other commission merchant. I think it the duty of the editor to go along the street and find out what honey is selling for. He should not depend on one man; there are other men selling just as well as Mr. Burnett. I told you I am selling two cents higher than others.

Pres. York—Now, Mr. Burnett, it is "up to you," as they say.

Mr. Burnett—I wish Mr. Dunn would tell us to whom he sells honey so we can get advantage of the two cents. I didn't know that Mr. York relied solely upon me as to the quotations. I think in a sense he meant to say that he has quotations from me, and expects to get them whenever there is a change in the market, and that is our purpose. As soon as there is any change in price we send in a quotation, and, as a matter of fact, honey has not changed in price here in the last 60 days, and there is practically no necessity for a repetition of those figures. So far as the question of controlling the market is concerned, I don't think many people here, who have any experience, have the idea that I, or any two or three, control the market price of honey. Of course, I have had beekeepers come in here who sell their honey in Chicago, or as much of it as they can, and sometimes leave the balance with me or somebody else to sell, and they say, "Here, now; why don't you put up that price two cents a pound? You can do it; and if you can do it that helps all of us; we can all get a higher price. If you put it up then we can sell." Now, I took a little pains to find out what the producers of honey in Cook County, who asked me to do that thing, did with their honey. Of course, we know that the majority of the trade of this city, that buy in any of the honey, before they buy they find out what can be done on the general market. I asked many if they knew so and so? "Yes." Have you ever bought any honey of him? "Yes, a little; I bought some a while ago, and he came in the other day and wanted to sell some more." What price did he ask? "He offered to sell a cent less than your price." Of course, I am willing to do my share, as I see it, for a community as a whole, but I don't want to be deluded to putting up a price that is really a fictitious price, and have them go around and say, "You can't buy it on South Water Street. Here is the quotation of Burnett & Co. I will sell it a cent less than they do." That isn't the market. Is what he sells at going to be considered a market? If we put it a cent higher than he is selling it at, that isn't a market. A market is made by two people—the buyer and seller. The buyer says, "I will give so much." The seller says, "I want so much." Now, then, if they cannot come together there, it is no trade. There is no market. If they come together there is a trade, there is a market.

Mr. Dunn—I take it that it is a very large market, and I claim that the price of honey can be advanced to a price so that honey from outside cannot come in and undersell us,

when you ask more than quotations in other cities, and what they can bring it here for from other points; but you can afford to hold the honey high enough, and I claim it is the duty of the gentlemen handling honey in this country to make a price. If they are not getting commission enough let them say so; they ought to get a reasonable commission. The commission merchants can't afford to do business unless they get a good commission. It is a small business and they must get a good, round commission, and then hold the price up. I have been told by men among the merchants along the line that there are two houses here that control this honey market. Mr. Burnett is one, and I can't find out who the other is; and these two houses fix the price. I don't know what he thinks; if honey outside is quoted at a certain rate he can afford to quote the Chicago price with added transportation here, and sell at that price, because there is a big market here.

Mr. Burnett—It seems to me it will increase the importation of honey if we quote a very high price, or the highest possible price. If we quote very high prices people will say, "They are getting big prices in Chicago." If we quote lower prices, they will say, "We can get more here." It seems to me it is advisable to quote rather a little lower than the highest price. Another thing, if the bee-keeper in disposing of his honey comes to the market and can't get that price, he will say, "Gentlemen, here are your quotations; now you don't sell for that price. Why don't you?"

Pres. York—It is a big question.

Mr. Dunn—Hogs and cattle are quoted daily, and why should not honey follow the same course?

(Voice from the audience)—Is honey quoted on the exchange?

Mr. Dunn—Certainly, it ought to be. We have a right to see it daily quoted.

Dr. Miller—I noticed today for the first time the quotation of honey in the daily paper—in the Record-Herald. It is the first time I have seen it quoted for years. There is, however, this difference between the market price of honey and that of other articles. For instance, in beef, cattle come in every day and the papers report the ruling prices at which they were sold. Now if those prices did not change daily there would not be the necessity for the daily report of them. If the price of honey changes every day then there is the necessity for a daily report, and I suppose that it doesn't matter, either, how we get these reports, provided we get them correct, and as often as a change is made we should be informed of it. If the American Bee Journal does not report the changes from time to time they are failing of their duty, but I don't know that there would be any necessity for their getting a fresh report so long as there is no change in it, but I believe this: We should know the truth.

Mr. Dunn—That's it.

Dr. Miller—The truth never hurts anybody. We should have the whole of it, whether up or down. We should know as nearly as we can the amount of honey in the country, and that helps to fix the prices. I believe that one man might do something towards fixing the price. I can do a great deal towards fixing the price in Marengo. I defy Mr. Burnett to hurt my market; but if I come to fixing the price in Chicago it is only a drop in the bucket, and I suppose that Mr. Burnett or any other man must be guided by the law of supply and demand. If he gives a false report of the market he is very much to blame for it. It is his business to tell Mr. York what the transactions are, and not what he wants, or anybody else wants. That's what we ought to have—the market for honey. Here is a question that one time came up for me: I see they report so and so in Chicago; then I see at another place it is two cents higher, and as nearly as I understand the matter of freight it will not be two cents from one place to the other; then I say, Why not ship all the honey from Chicago and get that higher market; but this comes in: Any of you who have done very much in shipping honey know that it is not simply the question of amount of freight, but loss and breakage, so that I would rather take a good deal less for my honey in Marengo than have it shipped off. Those things must be considered. I will tell you one of the things that you can do: Whenever you find that the reports are not all right—I said I couldn't do anything towards changing prices in Chicago, but I did once. At one time, a good many years ago, when the daily papers were reporting the market, and anything but correct, I went to the editor's room and laid before him a bill of sale, and showed him just what the prices were, and the commission was just about the average, and I changed the prices then two cents a pound, and any of you can do that. If you have sales, report the sales to the paper, and they may help.

Mr. Chapman—The Daily Trade Bulletin has all of the prices on South Water Street and stock-yards, and also a

separate sheet with the Chicago Board of Trade prices on, and they follow largely the same method that is followed by the American Bee Journal that is quoted for honey, because the price of honey does not fluctuate up or down frequently; that is to say, it is frequently stationary at a certain price, or just about a certain price, for sometimes several weeks at a time, then they don't change the quotations, they don't even change the print of it. It stands sometimes several weeks; but let there be a little difference in price, sufficient to affect more than one house, and they are quick to take note of it in that Trade Bulletin, but with hardly any more change than occurs in the American Bee Journal.

Dr. Miller—The amount of transactions in any one article makes a great deal of difference with the papers and with the market as to the reports. In the daily papers you will find the market for green goods and picked turkeys, but you will not find that they give you the report of market prices of honey, because they say there is so much less, not even enough honey to warrant any quotation at all. You and I think there is a big lot of honey sold, but compared with cheese it is a small matter. They will only report things in which there are large transactions. I doubt very much whether there are more than two or three men here who can give me the fair market price of turkey-feathers just now. I can't straighten you out if you don't know anything about it. That's just what applies to this honey-business. If we can produce enough of it and get more on the market we will have more exact prices. So long as there isn't enough of it so that the daily papers feel warranted in giving any quotations at all, you can't have the thing figured down.

Mr. Dunn—Where the bulk of the product is in the hands of two houses they can protect the market. Take the outside markets and compare them and the cost of transportation here. They can get that price. They have to make the money on it. They have the right to a liberal commission, but I want Chicago to stand as high as it can stand, and it can afford to stand transportation added as well as any one in the market.

Dr. Miller—There is no law that I know of against allowing Mr. Dunn, when the market is two cents higher elsewhere, and one cent for transportation—no law against Mr. Dunn buying out these two houses and transporting it. [Applause.]

Pres. York—I rely upon Mr. Burnett to give the proper quotations. I believe he can tell the truth; I have felt pretty sure in the quotations. I would like to have him raise the market two cents, if he can.

Dr. Miller—If he can raise the market two cents we ought to raise his wages.

Mr. Dunn—Yes, sir.

(Continued next week.)

## Contributed Articles.

### No. 7.—Apiculture as a Business.

#### A Discussion of Selling by Weight or Case—Which?—The Cause of Light Weights—Colorado Grading Rules All Right—Two Sides to the Question.

BY R. C. AIKIN.

[NOTE.—Since the following article was written there have been several articles and editorials on the subject. But, as the ground has not been fully covered by any, and this article touches a number of points not at all considered by other writers, I think it best to let it go without re-writing. I recommend particularly that the reader note the abuse that may be made by the middlemen of buying by weight and selling by the case. Also, do a little figuring on the cost of cases and sections, and you will see that there is nothing gained by producing light-weight honey. Three pounds more honey in the case pays for the case and sections, approximately.]

IN No. 6 [page 167] I dealt somewhat with the questions of separators to obtain even-weight sections, and of selling "by the piece." While the thought is before us, I may as well pay my respects to the Editor, and to Mr. Burnett.

I think I see Messrs. York and Burnett doing a retail business, each handing out 14-ounce pounds to customers who pay for 16 ounces. They sell also maple syrup at \$1.50 a gallon, and give me 11 pounds, *can and all*; canned fruits at so much for so many—1, 2 or 3 pound cans, "shorts"; 48 pounds of flour when I ask for and pay for 50 pounds; and on and on through a long list of articles.

I hear my friends in Chicago laughing when they have read thus far, and, between their fits of laughter, saying to me, "Everybody does so; it's the custom, and the can, bag, box, etc., are worth, or cost, something." Then they turn to the wholesale-house man who has just come in, take him into the private office and "raise Ned" with him because he insists on selling flour by the hundred-weight, that is, four pounds short; and all other goods in like manner. Excuse me, I mean they treat the "traveling man" like a king, and do the "Ned" act with honey-producers who sell honey at so much a case, guaranteed so much per case average, with a minimum below which no single case may go.

York and Burnett, stand up. Now, sirs, tell me how we came to produce short-weight sections. Tell me if it was the bee-keeper, or the wholesale buyer, or the retailer, or who it was that wanted 14-ounce sections, or originated them. Do you say none of them? Possibly you are right. I do not think that any one specially devised or brought out a 14-ounce section with a view to selling a "short" pound. I suspect so good, fair and honest a man as A. I. Root, and possibly some other good men, had something to do with it. The plan was to have a  $4\frac{1}{4} \times 4\frac{1}{4}$  pound section that would fit a certain place. This same section was originally very largely used two inches thick, and was intended to hold a full pound.

Later it was found that a two-inch-thick section was too thick to be quickly and neatly finished by the bees; then came the idea of reducing the thickness to get a nicer and better-finished one. The prime object sought was the quality of the goods, and when bee-men found that the thinner section was in fact a nicer one, they consoled themselves with the thought that, if they could not supply a full pound in the thin section they could make it up in quality, thus no one was harmed. Possibly some have been guilty of selling the short-weight section with the hope to increase profits thereby; but, sirs, that thought did not originate the short-weight; but will you deny that the 48-pound 50-pound sacks of flour, etc., had not so good an excuse back of them?

The bee-man can produce a neater and more salable article in a section thinner than two inches; and, knowing this, we use a thinner one. We would use a thinner still if it were not that the weight would be altogether too much reduced. You see we can not change the other dimensions of our sections without a great expense in changing hives and such, hence we are trying to do the very best we can under the circumstances.

Then, too, conditions of the colony, strength of the honey-flow, and a great many things conspire to make a variation in the weights of sections of honey, but the fraternity, as a whole, are striving to obtain the most even results. If we were to-day—knowing what we do of the science of the business and needs of the trade—to be placed in a position in which we were to start all anew—hive-making machinery, size, shape and proportion of hives—in short, with present knowledge but everything to build anew, I would make some changes that would be for the better in obtaining an honest and best pound of honey. I believe thousands of others feel just the same way.

So the light-weight section came, and came not simply of choice, or premeditated for fraudulent ends. Once here, no doubt some bee-keepers who retailed honey thought to increase profits. And, some retailers not bee-keepers, saw that to buy 22-pound cases of honey at 10 cents a pound, and retail at 12½ cents a piece, meant 80 cents profit, where a 24-pound case bought and sold in the same way would only give a 60-cent profit. This made an inducement to demand a 14-ounce section, and that it be sold to the wholesale and retail merchants by the pound.

Now, sirs, Messrs. York, *et al.*, can not you see that when I produce light-weight sections to sell by the pound that it is to your interests, and yours only? One thousand sections for light-weight use cost me almost, if not quite, as much as for heavy-weight use. Cases ditto. And, when you make me sell to you by weight it is plainly your advantage and my loss. If I am to sell by weight I want 18-ounce sections, for then I have the pay for four ounces more honey, and the sections and cases cost me no more than for light-weight goods. A case of 14-ounce sections at 10 cents a pound brings \$2.10, while a case of 18-ounce ones at the same price brings \$2.70—enough to pay for the case and sections, and approximately a good, big 25 cents a case net profit besides.

But something is wrong. I should not sell 14 ounces of honey for a pound, nor should you. You should not want to buy my honey by weight and sell by the piece, nor any



such thing. The bee-keeper who produces light-weight honey and sells it by the case without specification or limit is decidedly wrong—just as wrong as the wholesaler and retailer who wants him to produce light-weight sections to be bought by the pound and sold by the piece—the whole thing is of the same rotten piece of cloth. This everlasting shifting and changing to gain a temporary advantage over somebody is a sad thing in our commercial life, I care not who does it.

I have told you somewhat of how and why we have a light-weight section, and that which follows—light-weight cases. Not every middle man has been guilty of taking advantage of it as herein indicated, but such things have been done. Having studied out all these things, threshed over and over the straw to get every grain of truth in it, Colorado bee-keepers have adopted a fair and honest method of grading and selling. The proof of my statement is in our Grading Rules, which specifically state that certain minimum weights shall obtain in every case. Any buyer who buys under these rules, so far as weights go, is protected, and so is the producer. I defy any man, whoever he may be, to prove to the intelligent reader and business man, that there is any more fair and honorable plan than that adopted by the Colorado State Association. It shows in itself that it has honesty as its basis—the greatest amount of protection to all concerned.

Again, I wish to call the attention of producers to the idea of profit or loss as between light and heavy weight sections. On the basis of general averages, prices of commodities will adjust themselves sooner or later, and any gain you can hope to make by light-weight sections is only temporary, soon discovered, then a readjustment comes. If you do have less than a pound in a section, when you sell by the pound you are the loser, because your cases and sections cost you just as much for light as heavy weight. If you sell by the case and have not the weight therein—if the shortage is known it only creates suspicion, prejudice, and a disposition to hold you down to a lower price. The honest pound gives confidence, and should be striven after. But, as every bee-keeper knows, it is impossible to have absolute uniformity of weight, but you can hold confidence and present a fair basis by guaranteeing and selling a minimum weight per case—it is fair to all, and should be done by all. Colorado Grading Rules are a protection to buyers, and the buyer purchasing under these rules gets all or more than he pays for, because every case is to weigh so much, a minimum limit placed on each individual case, and a general average on the whole lot, so there can not be any "pig in the bag" about it.

If honey must sell at wholesale by the pound, it must also sell at retail by the pound, but it *does not*. The "pig in the bag" does not apply to Colorado, but the "nigger in the wood-pile" has been made to serve to the hurt of some Colorado honey-producers. Our rules are all right, and every buyer should insist on their observance when he buys; their enforcement protects the wholesale buyer, and limits the producer, preventing fraud. The very purpose of the adoption of our rules was to *avoid sharp dealings*. It is the common understanding that 24 pounds is a case of honey, and buyers knowing this will buy a car of honey to be delivered in Chicago, or other market, at say 10 cents a pound, or \$2.40 a case. When the honey arrives, and the buyer weighs it—which he will do—and finds only 21 pounds to the case instead of 24, he kicks, and having everything his own way because the honey is in his possession, he refuses to pay \$2.40 a case; he will pay but \$2.10, because he bought at \$2.40 a case, and the case is three pounds short.

We have, therefore, adopted a standard of weights, so that while it is impossible to have absolutely even weights, we can have a rule that protects each way—both seller and buyer.

But the Editor will *again* ask, "Why not sell simply by weight?" Well, if we sell *simply by weight*, why, sir, I will put into first grade honey every very nice 10, 12 or 13 ounce section—its *only* fault being light weight, and thus there may be sold as No. 1 honey many cases as light as 15 to 20 pounds. But our rules will compel the producer to put in a minimum weight in every No. 1 case, and, no matter how fancy his honey may be otherwise, he must have *weight*, too.

Larimer Co., Colo

(To be continued.)

### No. 3.—Improving the Races of Bees.

BY ADRIAN GETAZ.

(Continued from page 247.)

#### INFLUENCE OF PREVIOUS MATING.

The opinion has often been expressed that while the egg producing a drone is not impregnated, it may nevertheless be influenced by the drone which mated with the queen. In support of this the assertion has been made that a young animal sometimes resembles not only his father and mother, but also the male which had mated with the mother at some previous time.

We will discuss the second question first. Such an influence in an impossibility. When the female germ (the scientists call it the egg) is ripe, it cuts itself completely loose from the organ that produced it and descends in the womb; there it meets the male germs. These are extremely minute, being possessed of a distinct and independent life. The majority of them soon die and are thrown out. Some meet the egg and enter into it. When the egg is thus impregnated, a sac is formed around it. The egg develops itself from within—inside of that sac. The only communication that the new being has with the mother is an opening in that sac, through which the blood of the mother brings nutriment to the offspring, and carries out the rejected matters.

How could the male germs have an influence later on, when they were never a part of the mother's body, when they were completely loose, as foreign bodies would be, and soon die or become a part of the young offspring?

Now I will answer some of the arguments in favor of this doctrine. In the first place, the fact that a calf or colt sometimes resemble the male used in a previous mating has hardly any value as an argument. A number of calves and colts are neither exactly like their mother nor exactly like their father, especially in regard to color. That occasionally some would resemble a male previously used is no more than should be expected.

The case of fowls is altogether different. The fact is, that one mating is sufficient to impregnate the eggs for several days, from 5 to 8 or even 10 days. That is, the male germs live in the hen's body that length of time, ready to impregnate the eggs as they come to maturity.

Suppose that before the 5 or 10 days are over, another mating takes place; then for a few days that hen will carry the male germs from both roosters, and whatever eggs mature during that time may just as well happen to be impregnated by the germs of the first mating as by those of the second. The chicks resulting will actually be offspring of the first mating. In this case, like in the preceding, there is no back influence from a previous mating. For full information on this subject, see the scientific works on physiology. The elementary books found in the schools and ordinary bookstores are not sufficient. Munn & Co., of New York, N. Y., can furnish any scientific book published anywhere, and give the information necessary to make the right kind of purchase.

Concerning bees, the assertion is that the drones, though born of unimpregnated eggs, are, nevertheless, influenced by the drone which mated with the queen.

In the first place, this alleged influence is an impossibility, as far as we can ascertain. When a queen mates, the drone-germs enter in a sac situated near the end of her body. The pressure of the mating operation opens the sac and puts the germs in. Then the sac closes and they remain therein, entirely cut off and without any communication with any other part of the queen's body.

The eggs are formed in what are called the ovaries, situated farther up in the queen's body. As they mature, they separate and come down through what might be called a tube, and pass before the sac containing the drone-germs and are discharged. The sac has a small aperture which the queen can open for an instant, when an egg passes. If she opens it one male germ slips out and enters into the egg through an opening that exists there. The egg is then impregnated and becomes a female egg possessing the rudiments of the organs of both queen and worker. The amount and quality of feed given during its development determines which set of organs will develop. If the egg is not impregnated, it will produce a drone, no matter whether the queen has mated or not.

The proof advanced in favor of the above assertion is something like this: An Italian queen mates with a black drone. Her workers are of course hybrids. According to the principles generally accepted her drones ought to be pure Italians, but they are darker than the apiarist expected.

The Premiums offered this week are well worth working for. Look at them.

How is it? Well, in first place, as we have no control of the mating, we can never be sure that a queen is absolutely pure Italian, but even if she was it would be no proof. The Italian queens and drones vary greatly in color, some are quite dark. The fact that the drones were darker than the apiarist expected does not prove that they were impure or were influenced by the drone that mated with their mother.

#### WHAT SHALL WE BREED FOR?

Honey-gathering qualities, of course. Gentleness, capping the honey white, etc., will be considered to some extent, but the honey is what we are after. And the queens whose colonies give the largest surplus will be the ones to breed from.

I mentioned once the fact that in breeding for honey we are working in the same line as Nature does, and, therefore, we could not expect such results as have been attained with other kinds of domestic animals. For instance, the faculty of producing milk has been left almost completely undeveloped in the wild animals. We take the same animal and develop that quality away beyond what Nature does in the wild state. But suppose that we were to work in the same line as Nature; suppose, for instance, that we would try to prove the hardiness of the Texas cattle, we would then make but little progress, because that quality has already reached the limit, or nearly so.

This is very nearly the case with the bees. The qualities tending to honey-gathering—such as activity, hardiness, etc.—are already well developed, so there is not room for very much improvement, as the limit attainable cannot be very far.

That is not very encouraging. To offset it we must remember that a very little improvement might increase the surplus considerably.

In feeding back extracted honey to complete the partially filled sections it has been found that a good colony of bees consume  $1\frac{1}{2}$  pounds of honey per day. That honey goes to sustain the life of the bees, keeps the necessary heat, feeds the brood and produces the wax; it cannot be doubted that the same amount is required during the honey-flow. Through the winter something like 25 pounds is used. After the honey-flow, perhaps half a pound a day. Half a pound of honey for perhaps 20,000 bees is a mighty small daily ration for each one, considering that there is always a little brood reared, and perhaps some wax secreted.

Upon the whole, a colony of bees of normal size consumes something like 200 pounds of honey every year, at least, and probably more.

We have a colony that gives us 40 pounds of surplus; that means that 240 pounds have been gathered in all. Now we improve the stock, and the colony becomes able to gather  $\frac{1}{6}$  more, only  $\frac{1}{6}$ . The total gathered will be 280 pounds instead of 240. Deducting the 200 pounds consumed, we have now a surplus of 80 pounds—double what we had before.

#### SIZE OF BEES.

Would we gain by breeding a large-sized kind of bees? Notwithstanding the contrary opinion of some high authorities, I say, unhesitatingly, Yes. Granting that a large bee would not fly faster than a small one, and granting, also, that she could not suck the nectar out of the flowers faster than the small one, there would yet be a saving of time going and coming. For the large bee would bring in the same quantity of nectar in a less number of trips to the field and back. But it is probable that the large bee would fly somewhat faster, and it is almost certain that she could suck the nectar from the flowers faster, on account of a larger tongue.

In order to breed larger bees it will be necessary to use foundation with larger cells, for a bee cannot be larger than the cell in which she has been reared. If any one doubts the correctness of this last statement, let him look at the drones reared in worker-cells. That will settle it.

The increase of the size of the cells should be gradual, otherwise it would be difficult to avoid and overproduction of drones.

There is a limit to the size of the cells that can be used. Too large cell would not hold the honey; that is, the honey would run out of it. It is probable that cells of drone-size, or perhaps a fraction larger, are all that can be used. This might give us bees the size of the famous "Apis dorsata".

In India and other parts of South Asia are found several kinds of wild bees, some of them the size of our bees, some much smaller—and finally the *Apis dorsata*, much larger. While this last gathers a considerable amount of honey, the small kinds do not gather enough to speak of, and never more than they can use.

#### LONG TONGUES.

I am not going to rehash the subject. I want only to bring out one point that has been neglected.

With the increase of population and improvements of farming, the forests, pastures, and other present sources of nectar, will decrease and disappear; red clover will be more and more cultivated as being the chief crop of a good system of farming. And the time comes when it will be almost the only honey-plant available. Other things being equal, the largest bees will evidently have the longest tongues.

#### INFLUENCE OF LOCALITY.

Yes, locality and also management. Let me give some examples: John Smith lives in a good-locality; plenty of flowers and to spare. Bees with short tongues will find all they can gather, as well as those with long tongues. Then the colonies giving the largest surplus may just as well be among those with short tongues.

Jim Jones lives in a poorer or overstocked locality. There are not enough flowers accessible to short-tongued bees to enable them to furnish a good surplus. After that they will be idle, while the long-tongued bees will continue to gather from deep-corolla flowers. Result: The long-tongued bees will give the most surplus. Jim Jones will breed from their queens and eventually create a race of long-tongued bees.

Gilbert M. D. uses a small hive, or, rather, brood-nest. The colonies with very prolific queens fill it early, and then swarm for lack of space, and just as often as not keep on swarming during the honey season. No surplus, or very little.

Those with queens not very prolific do not get crowded, and refrain from swarming. Colonies that do not swarm are those which give the largest surplus. These Gilbert will choose for breeding purposes, and eventually create a strain of moderately prolific bees.

Camille P. D. uses Dadant hives. Queens not very prolific do not fill the brood-nest in time for harvest. They keep at it during the honey-flow, and when the colony is ready to go "up-stairs" it is too late to do much good. Those very prolific fill that big brood-nest with a whole army of workers in time for the harvest, and when the flow comes a big surplus is stored. Result is, Camille selects these prolific queens as breeders, and creates a strain or prolific queens.

A contribution of mine on the same subject (August, 1901, page 646) was bitterly, and I think unjustly, criticised in the *Bee-Keepers' Review* (for November, 1901.) To those who might think the above is not exactly what it ought to be, I will say this: Instead of indulging in cheap criticism, write a better article on the same subject, if you can; and if you succeed I will be glad of it, for I will get the benefit of it.

Knox Co., Tenn.



### Value of Good Queens, and Methods of Queen-Introduction.

Read at the Wisconsin Convention in February, 1902,

BY ADA L. PICKARD.

IT is not that I choose to come before this assemblage, nor is the subject before us one of my own choice; but since a number of the members of this Association asked that the secretary contribute a paper, and suggested the present topic, I was willing to do what I could to help the convention along, and so it may be said of me as it was of the widow who gave her mite, "She hath done what she could."

No adage is more true than, "What is home without a mother?" and just so true is the statement, What is a colony of bees without a good queen? By a good queen I do not mean a beautiful queen to look at, but one that is prolific.

Upon no other one thing does the success of the apiarist depend as it does upon the queen. Give me a good queen—one that can be brought up to the highest production of eggs just at the time they are wanted—and I will promise you a honey crop, if the flowers do not fail to secrete nectar; but with a poor queen—one that may not even be coaxed to lay to little or no purpose at the proper time—the flowers may bloom and secrete large quantities of nectar in vain.

I must confess that we have had queens at different times in our apiaries that, with all the coaxing we could bring to bear upon them, would not lay any more eggs pre-





THE HOME APIARY OF MRS. W. J. PICKARD, RICHLAND CO., WIS.

vicious to the honey harvest than would keep up the spring strength of the colony; and when the flow was at its best, there would not be  $\frac{1}{4}$  of the number of workers there should be. No doubt these were good, prolific queens one day, but at this time they were old, worn-out queens, proving themselves worthless. Those colonies made a failure for that season, all on account of the queens. The more queens of this kind the apiarist has the worse he is off.

So much is being said about implements, apparatus and improved methods, one would naturally think that success depended upon a certain kind of a hive, frame, section, section-case, or some other apparatus or a certain method of manipulation. New apparatus, fixtures, and methods are all right, but it is not wise to lose sight of the one important fact, that the queen is the mother of the colony and it is upon her that the strength of the colony depends. Truly, the key-note of success is struck only when the bee keeper sees to it that each colony has a good, young, prolific queen. It is upon the queen that the greatest success is hinged, and until the apiarist awakes to the true value of the queen, just so long will it be until he becomes the most successful. To me it is a plain fact that in no one thing in bee-keeping does quality count for so much as it does with the queen or mother-bee. Of course, if we only desire to count our colonies, then a poor queen is better than none; and then there are other times when she may hold a colony together until we can get a better one; but let me repeat, that an apiary with all poor queens is worse than no bees at all. When we come to the full realization of the great achievements which can be obtained with a really good queen, we, as apiarists, will put forth more energy along this line of our pursuit than we ever have done before.

Some may ask why the best colonies did so well. Because they had a large working-force of the right age, at the right time, to take advantage of the honey-flow. This is simply due to a good queen—one doing her part at the right time, and at no other time. The poor colonies failed to do so well because they did not have a full working-force—due to a poor queen or because the bee-keeper failed to have the queen do her duty when she should have done it. Some may ask, "Can I get all colonies to do as well each year as my best colonies do?" I will answer the question by asking, Why not? If all of the colonies are of the same strength, having a full working-force, why will not all do as well as the best colonies? This being true, the trouble lies in not having all the colonies of equal strength, and this condition develops primarily upon the queen. We may not have all exactly alike, but we may have them approximately alike—if we work for that object.

Many queens are bred for beauty rather than quality. If we want superior stock we must breed from the superior workers, and by careful selection and breeding one can greatly improve the stock of bees. Pardon for referring to our own apiaries, but we take pride, if I may say so, in giving special attention to the careful selection and breeding of our queens for quality, and for this alone we are well paid in our honey-yield.

Then, too, the wintering problem may be greatly rectified by keeping close account of the age of the queens. We find that we have much better success in wintering with young queens than with old ones. Here is a value of queens that many have overlooked. But a great deal of the success

for the coming season depends upon the queens we have put into winter quarters.

#### INTRODUCING QUEENS.

Perhaps no other one subject connected with bee-keeping has received so much attention in our bee-papers and manuals as has the subject of introduction of queens. Yet, after reading the methods and discussions given, it is plainly to be seen that success does not always attend the efforts. On the contrary, many losses arise from the fact that bee-keepers in general do not discriminate between queens taken from one hive and placed in another, and those which have come long distances by mail. In introducing queens from one hive to another in the same apiary, it does not require one-half the care that must be given to a queen coming from a distance.

In introducing a queen from our own apiary we very frequently use the following methods:

We go to a nucleus from which we wish to get a queen, and, when she is found, we take the frame of brood she is on—bees and all—together with another frame from the same hive, carrying them to the hive from which we are to take the superannuated queen, placing the combs so the queen will be between the two combs; then we secure the poor queen and dispose of her; then we take out two frames brought from the nucleus in their place, puff a little smoke over the top of the frames and close the hive. The object in taking two frames with the queen is so that while waiting outside of the hive she and most of the bees may cluster between them, thus becoming quiet. When placed in the hive both are put in together, thus leaving the queen quite among her own bees. This is a very easy and safe method.

To introduce a queen that has come to me from abroad, or one which I consider of more than ordinary value from our own apiary, we proceed as follows:

First catch the undesirable queen and let the bees remain queenless from 24 to 48 hours. In the meantime prepare a cage as follows: Cut a piece of wire-cloth 4x6 inches, bend up sides (after cutting out a piece one inch square in each corner), forming a tray-like cage; ravel down the edges one-half inch. Then we take the shipping-cage containing the queen and escort bees and release all the escort bees—we do not allow any of the escort bees to go with the queen. Select a comb of hatching brood with some unsealed honey above the brood; place the cage, previously made, on the comb over some unsealed honey and hatching brood, and let the queen to be introduced run under the cage. Press the cage into the comb until firmly imbedded into it, and in 48 hours more, if the bees have not released the queen, she may be released.

I will not mention any other ways of introducing queens. There are probably as many different methods as there are bee-keepers, and with precaution almost any method may be used with success. I will simply start the ball rolling, that we may gather ideas from others.

Richland Co., Wis.

## Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

### Management of a Queenless Colony.

In looking over my small out-apiary I found a very strong colony with only drone-brood in worker-comb, and some drones already out; also one queen-cell containing a young larva. I moved it away a little distance and put a weak colony from a stand close by in its place. I then put a frame containing brood and eggs into the queenless colony by way of experiment, to see if they would get a queen fertilized with those drones, as there were no signs of any

drone-brood in any of the other colonies, and no other bees within 10 miles.

1. What would you have done under those circumstances?

2. If, as I think is most likely, there is no fertilized queen in about a month, how would you treat that colony?

3. If, about two or three weeks earlier in the season than this (April 6), you found a strong colony to be queenless, without laying workers, would you send for a queen, or unite it with a weaker colony? If the latter, how would you proceed? If you would not send for a queen, why not?

BRITISH COLUMBIA.

ANSWERS.—1. You do not give the time, but, of course, it was earlier than the date of your letter, which is April 6, and if the seasons are about the same as in northern Illinois (you are very much farther north, but you are on the Pacific Coast), I should have united the queenless colony with the weak one, or perhaps with two weak ones.

2. Unite it with one having a good queen.

3. Unite it with a weaker one, perhaps by simply placing one colony over the other with paper between, and a very small hole in the paper to allow passage from one story to the other. I would not send for a queen, because there would be only old bees in the colony very likely, and rapidly reaching the limit of their lives, so that the prospect of building up a good colony by adding a queen would be not the best, and in the long run there would be a greater gain to give some weak colony a better show.

### Prevention of Swarming when Producing Comb Honey.

I have all the bees I want, and run for comb honey. How can I best prevent any increase?

Now, Doctor, I am sure you have about the same number of colonies year after year. Please give your best plan. I feel sure all big bee-men have a good plan, yet I have never seen a good explanation of any plan.

INDIANA.

ANSWER.—It is somewhat doubtful that any bee-keeper has a plan entirely satisfactory to prevent swarming when working for comb honey. One way is to allow the bees to swarm once if they will, then in the spring to unite so as to reduce to the desired number. Another way is to have all queens clipped, and when a colony swarms kill the old queen. About eight days later listen in the evening by putting your ear to the hive, and when you hear the young queen piping go to the hive the next day and destroy all remaining queen-cells. Another way is more radical, and prevents swarming: As late as you can without risking swarming, take from the colony all its frames of brood and leave it on foundation or starters.

### Stimulative Spring Feeding.

I work for comb honey, and want my colonies strong when the honey-flow comes. The books say, "Stimulate brood-rearing by feeding." You said not long since, in answer to some one's question, that "spring feeding is a two-edged sword, a good thing for beginners to let alone." What is the danger? And how can I feed, if at all? or must I wait until I am a veteran?

OHIO.

ANSWER.—I don't know whether you should wait till you are a veteran, or whether you are in that class who should never practice stimulative feeding at all. If the latter, it will, I feel pretty sure, be some comfort to you to know that you will have myself for company. I do not feed anything in the line of honey or other liquid food to stimulate brood-rearing, and I do not believe I would gain anything by it. If my bees have enough stores, there is little danger but they will have all the brood the bees can cover, and what more do I want? But it would not be right for me to insist that every one should have his shoes made on my last, although I think it very likely that you and I are alike. Some, however, may have a week or more of nice, warm weather, when bees can fly freely, and yet gather nothing, and in such a case brood-rearing may cease entirely. For such persons it may be decidedly advisable to feed so as to keep up brood-rearing.

As to the danger, there is danger that the inexperienced will feed and excite the bees to flying at a time when it is chilly and windy so that too many bees are lost. If advisable to feed at all, and the feeding is done at a time when it is warm and bees can fly freely, it does not matter such a great deal how you feed. A good way is to uncap or mash down the capping of the sealed honey in the hive.

I said I do not need to give any liquid food, but I do often offer the bees a substitute for pollen, and I am not sure but it stimulates as much as the liquid food, at the same time being safer. If I didn't do it for any other purpose, I'm not sure but I would do something at it for the fun of seeing the bees tumbling around in the meal. You may take almost any kind of ground grain—I use mostly ground corn and oats, which is easy to get—put it in a shallow box, have the box tipped a little to one side, and as often as the bees work down the feed to a level turn the box around. When the fine part is worked out, the cattle or horses can have the rest. As soon as the bees can get plenty of natural pollen, they will desert your meal.

### Spraying Near End of Blossoming.

There are a number of orchards near my apiary, and as soon as the bloom falls they are going to spray with arsenic. Now, as a matter of course, there will still be more or less blossoms on the trees that the bees can get at. Is there anything I can do to prevent their being poisoned? I have thought of closing their entrances with wire netting; and I might, if it is absolutely necessary, take some of them to the cellar.

COLORADO.

ANSWER.—It is possible that removal to the cellar would be advisable. If the owners of the orchards are intelligent, however, nothing of the kind will be necessary, for it has been decided at the experiment stations most conclusively that it is only a waste of time and material to spray while any blossoms are yet on the tree—not only a waste, but absolutely detrimental to the blossoms without doing any good whatever.

### Management for Extracted Honey.

I am working for extracted honey, and use supers the same as bodies, that is, 2-story hives with an excluder between.

I have about 50 colonies in hives one story only, to top out with empty hives. No comb foundation.

Would you recommend putting the empty hive above or below? Or would it be better to give some combs and some empty frames to each story?

CALIFORNIA.

ANSWER.—I don't know. Something depends upon what you want. If you would rather not have any swarming, then put the empty story below with the queen in it. If you would rather have the bees swarm, then put the empty story above, leaving the brood below with the queen there. Another thing ought perhaps to be considered: It is claimed by some, and denied by others, that you will have finer honey if you extract from combs in which brood has never been reared. There is probably little doubt that there is a difference, however little the difference there may be, and if you want the finest quality of extracted honey you may prefer to put the foundation above, leaving the queen below.

### Equalizing Colonies in the Spring—Increase.

I would like to get your best method of equalizing colonies in spring, and the best method of making increase without swarming.

I have 40 colonies—some at home, others scattered through the country—which I propose to run this season for increase only. I want to increase to 200. I am willing to feed some, if profitable. We have fruit-bloom, perhaps white clover, always sweet clover, and a fall bloom if seasonable. I would like to increase early, about May, so as to build them up strong.

INDIANA.

ANSWER.—The quickest way to equalize colonies is to take from the stronger ones all the brood and bees they have above the average, and that will yield enough to bring the weaker ones all up to the same level. But unless your colonies are strong enough to average at least four Langstroth frames of brood to the colony, I should strongly advise against that method of equalizing. Instead of that it is better not to equalize all at once, but to take the stronger ones first. Suppose your colonies vary from weaklings having only one frame of brood each, up to those having 7 or 8 frames of brood. Take brood from the strongest, reducing them to 4 frames each. Then give a frame of brood to each colony that has 3 frames, and, after that, if you have any left, give two frames to each colony that has two, so



long as the brood lasts. Two weeks later you can repeat the operation, not doing anything to strengthen the weakest colonies till all the stronger are brought up to the mark.

Unless you have had a good deal of experience you may make bad work increasing 40 to 200, and you are just about sure to make a bad mess of it if you get up to the 200 in May. Here is one way that I have successfully used: Suppose No. 1 has your best queen. Wait until your colonies are at least fairly strong, and until honey is regularly yielding, and by that time build up No. 1 very strong. Take from No. 1 all its brood with all the adhering bees, leaving the queen to welcome home the returning field-bees. The brood and bees you have taken from No. 1 are to be put on the stand of No. 2, or some other strong colony, setting No. 2 on a new stand. Then go to the remaining colonies, and take from each one all the brood it has beyond 4 or 5 frames, but taking no bees, and give this brood to No. 1. About 9 days later—certainly not more than 10 days later—go to the queenless colony that was left on the stand of No. 2, and divide it up into nuclei having 2 or 3 frames of brood each, making sure that each nucleus has 2 or more good queen-cells centrally located so there shall be no danger of chilling. Then take all brood and bees from No. 1 and put as before on the stand first occupied by No. 2, and fill up No. 1 with brood from other colonies, but no bees. Repeat this every 9 days so long as the flow continues, or until so late that there will not be time to build up. As the work continues you will need to add stories to No. 1, and equally to the pile of queenless brood and bees on the stand of No. 2. If there is danger of having the piles too high, you can start a second plant to working the same as Nos. 1 and 2.

### Uniting in the Fall—Extracting Late.

1. I let my bees swarm once, then build the new colonies up strong at the expense of the old. If I have 100 colonies in the fall, and want only to winter 50, what would be best, to kill off the surplus colonies, or unite in hives that hold 11 Langstroth frames?

2. Can I extract honey as late as October?

MINNESOTA.

ANSWERS.—1. I should prefer to unite so as to have strong colonies for winter.

2. Yes, but not without taking special pains to warm the combs before extracting. For 24 hours before extracting keep them in a hot room; all the better if hung up near the ceiling. No danger of having them too warm if you do not melt the comb.

### Early Queen-Rearing in Pennsylvania.

I opened a 10-frame hive April 5 (as the bees were flying) to ascertain their condition. I found plenty of capped brood but no young larvae, eggs or queen. But I found a queen-cell nearly ready to cap containing a large larva.

Now what I want to know is, whether I could safely and profitably get that colony in good condition for the honey season, which commenced about July 10 last year. Drones commenced flying May 23, last season.

I have been a bee-keeper since 1898 and have lost only 2 small colonies in box-hives.

Now I have 3 strong colonies besides the one mentioned, in 10-frame hives.

I do not care for any more colonies—all I want is a large amount of bees to store honey. The honey crop last year was poor; year before, good. PENNSYLVANIA.

ANSWER.—If I understand your question rightly, it is this: With drones flying May 23, will a queen reared from a cell nearly ready to seal April 5 be able to bring up a colony strong for the harvest by July 10? I should say she will not belikely to do so. The queen will issue from her cell by April 15 or sooner; May 23 she will be 38 days old, and the chances for her being fecundated at that age are not worth considering. Very likely some drones will be flying before that time, but hardly early enough, for she will probably fly out on her wedding-trip about a month before May 23. In general you will find that in the latitude of Pennsylvania a queen emerging as early as the middle of April will not be a good one. Perhaps your best plan is to destroy the young queen and get a laying queen from the South, or else break up the colony and divide its forces among the other colonies.

## \* The Afterthought. \*

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

### SERVING UP "REPORTS."

And so John M. Davis wants the reports well-digested and intelligible—size never stated as, "as big as a piece of chalk," and distance never "a right smart piece," and the keystones never left out from the arches of testimony. He seems reasonable in his desire and request; and yet most certainly nobody is going to fill the great yearning chasm in his soul to any satisfactory degree. Brief, lucid statement of things when they write—why, you might as well ask Algebra and Greek of a great majority of intelligent people. An editor can't do more than he can do. He can't scold continually about rambling and unintelligibility without frightening off the reports altogether. I expect if we knew how carefully he carves, and how deftly he fixed things that *must* be fixed, we'd send up a vote of thanks, and refrain from asking anything more. Page 171.

### THE "MUSLIN SANDWICH" COVER.

Doubtless a coat of paint with a thickness of muslin in the middle of it would make an excellent surface for some climates, providing you get *enough* paint both above and below, and also providing you keep putting it on as fast as the weather beats it off. Such a hive-roof would, I judge, fit best a climate of fierce sunshine and occasional violent rains. In a climate of little sunshine and endless drizzle there might be danger perchance that the surface would disintegrate. Page 173.

### BARRELS FOR COMB AND EXTRACTED HONEY.

The chaps that can't stand barrels for honey, and the chaps that want all their honey in barrels, can be reconciled by the method of C. A. Deadman, page 173: Make your honey secure in tin, and then fill barrels with the tins—for security and convenience in handling. Guess he's right, that no big package ever was or ever will be devised that will handle as nicely as a barrel. If second-hand barrels at ten cents each can be had, the expense ought not to frighten one—in fact, the greater expense of crates is one of the items pro.

### MELTING GRANULATED HONEY EXPEDITIOUSLY.

Pshaw! Didn't everybody know that? Then let them hear and heed that the melting of a mass of honey is very greatly expedited by frequent punchings and whirlings and subdivisions of it. Page 174.

### CARNIOLANS FOR INCREASE—THEN ITALIANIZE.

Here seems to be a winning kink which Mr. Coveyou of the Michigans gave: Premising that you start with a few bees, and want to build up a big apiary, keep Carniolans till you get your number, and then Italianize. Page 180.

### BLEACHING COMB HONEY.

On page 181 we have more about the unfamiliar subject of bleaching comb honey. Sulphur vapor and sunlight both. One bath of the former equals somewhat less than a week of the latter. But look out the sulphur doesn't "green" it; and look out the sun doesn't melt it. In Mr. Crane's experience 500 pounds out of 6,500 could not be completely bleached. Just one-thirteenth. I should call that encouraging success.

### THE SEMI-MOVABLE FRAMES OF YEARS AGO.

Exactly so, Mr. Greiner, the semi-movable frames of long years ago, and centuries ago, would not have benefitted us any. We should never have heard of them had not an inventive mind of our own age put the thing in actual working shape—not merely old-time working shape but modern working shape. Should the next great inventor find out how to fly to an adjacent planet we should directly hear about Elijah and Enoch. Soon the recondite literature of the world would contribute dozens of Hiawathas and Laou-Tzes who had made such trips before.

Wonder what Solon thought he was after when he went to Egypt in the interests of bee-keepers, 500 B. C. Could hardly have hoped to copy the floating apiaries on the Nile. Might have sought an improved manipulation and a better kind of bee. Page 182.

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- To prevent the adulteration of honey.
- To prosecute dishonest honey-dealers.

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The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

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## Weekly Budget.

THE APIARY OF ALBERT ROZELL, of Los Angeles Co., Calif., is shown in the picture on the first page. In it are over 150 colonies. Last year a car-load of honey was extracted in this apiary, and several hundred-weight of beeswax was obtained besides. The location of this apiary is a beautiful one, with the grand old mountains in the distance.

ALL FOREIGN SUBSCRIBERS will please remember that our queen or other special offers, whether in this journal or in others, do not apply to them. It really ought not to be necessary to say this, but occasionally some thoughtless foreigner desires to take advantage of our offers, and almost invariably forgets that there is extra postage for mailing from here to his home.

Please remember that we do not send queens to foreign countries—only the American Bee Journal, and that with the extra postage added to the yearly subscription price of \$1.00.

A CITY GIRL'S BEE-STORY.—Miss Jean Stirling is a little Chicago girl, 11 years of age. Mrs. J. J. Glessner, a prominent society lady, who is also greatly interested in the subject, gave a lecture on bees, and afterward "Jean," who was one of the select audience, wrote out the following from memory, and also copied the bees and cells as shown in the illustration accompanying:

### BEES.

The bee, or, as the Indian calls it, the white man's fly, is a very interesting insect to study. There are three kinds of bees—the drones, the queens, and the workers. Each hive has only one queen, which governs the others, and also lays the eggs. The drones do no work, so, in the swarming season, the workers, which do all the work, kill them.

A bee can see a long distance. After gathering as much honey as she can carry, she rises in the air till she sees the hive, and flies the shortest way toward it. The word "bee-line" is derived from this fact.

A bee will not sting unless bothered. Drones have no sting, but queens and workers both have.

The poison of bees is so deadly that if they sting an insect it will die very soon. Sometimes animals and men also have been known to die when a swarm of bees have attacked them.

The queen-bee, after pairing with one of the males or drones, begins to lay eggs. Sometimes in one day she lays two or three thousand. The queen lays worker-eggs in one set of cells, the drone-eggs in another, and the queen-eggs in a third. After three days small



QUEEN



DRONE



WORKER



CELLS

worms, called larvæ, come out of the eggs. In about five or six days—during which time the workers feed and care for them—they spin a cocoon. In 21 days the workers come out of



the cocoons, in 24 days the drones appear, and in 16 days the queen-bees come.

The old queen stings all the new queens to death if the hive does not happen to be full; but if the number of the inhabitants is large, the old queen and some workers start to find a new home.

The working bees supply the wax for the hives. In the back of their bodies there is a little pouch in which the wax increases, little by little. When this pouch is full, the wax sticks out in little scales. Then it is taken off and made into cells. These cells are six-sided, so as no space will be wasted.

When we eat honey it is difficult to realize how much patient labor is spent in making it.

JEAN STIRLING.

We think that is very well done for a city little girl who had just heard the story of the bees told, and then wrote it out as she remembered it. Of course, there are some little twists in it, but in the main it is fairly correct. Who knows but "Jean" may be a bee-keeper herself some day? Stranger things than that have happened.

We hope our little girl friends in the country will read Jean's story, and see if they could do as well at copying pictures of the three kinds of bees and the honey-cells.

## GENERAL ITEMS

### Peppermint Oil for Bee-Stings.

For the benefit of "Penn" (see page 218) and other bee-keepers who may not know of this remedy for bee-stings, I would say that I use peppermint oil; it will stop the pain and swelling instantly. MINNIE GREENMAN.  
Van Buren Co., Mich., April 13.

### Favors Ordinary Italians.

All my bees came through the winter safely. I have not lost a colony for several years, except some of the "yellow" order, which die with plenty of honey around them. I believe for all-around workers nothing can beat the ordinary Italians.

EVAN E. EDWARDS.

Madison Co., Ind., April 15.

### Spraying Fruit-Trees While in Bloom.

This subject, like most others, has two sides to it, or it is seen from different points of view, and different opinions are formed as to the effect it will have upon the pollen in the bloom and the crop of fruit. The American Bee Journal of November last quotes from the Farmers' Review on this subject:

"It has also been discovered that the poison is equally destructive to the life of the pollen, even when the amount of poison is only 9 to 10 parts to 10,000. Even 2 parts in 10,000 has been frequently found fatal to the pollen."

The writer quoted does not tell us what "the poison" was that was used in the spraying mixture that was so fatal to the fruit crop; and we must take it for granted that he refers to the usual "Bordeaux" spraying mixture. If so, then his conclusions are very different from the experience of some others.

I have always avoided spraying trees when in full bloom. I have heard that it would kill bees, and also injure the fruit-bloom. It looked reasonable that it would do both, and I did not believe that it would be of any special benefit at that time if the spraying was done just before and just after blooming. I accepted these conclusions without making any personal investigation. But there are others who believe that it is of great benefit to the fruit crop to spray the trees when in bloom; and, through the influence of bee-keepers laws have been passed in several

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## Maple Hill Poultry Farm

Is now selling **EGGS** for hatching from Standard Bred, High-Scoring stock. Barred Plymouth Rocks, Black Langshans, and Rose-Comb Brown Leghorns. Eggs, \$1.50 per 15; \$2.50 per 30. Stock in season.

### EUGENE HAMBAUGH,

16A4t **MT. STERLING, ILL.**  
Please mention Bee Journal when writing.

## BEE-SUPPLIES!

**ROOT'S GOODS** AT **ROOT'S PRICES.**  
Everything used by bee-keepers.  
**POUDER'S HONEY-JARS.** Prompt service. Low Freight Rates.  
NEW CATALOG FREE.

**WALTER S. POUDER.**  
512 MASS. AVE. INDIANAPOLIS, IND.

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States and in the Province of Ontario to prevent them from spraying while trees are in bloom. There are those of an investigating mind who believe in the old adage, "Try all things, and hold fast to what is good," who are not willing to take hear-say evidence without personal investigation, especially in matters pertaining to their own business and interest. Of this class I have a friend living on a neighboring island, over in the State of Ohio, who has almost a national reputation as a successful fruit-grower. There are no bees on that island to be killed, and he was willing to run the risk of losing the fruit on a few trees, or even the trees themselves, in the interest of the knowledge gained; so he made a test of the effect of spraying some trees while in full bloom, and comparing the result with trees sprayed after blooming. On July 27, 1901, he wrote to me as follows:

"I experimented with a half-dozen peach-trees just in full bloom, with Bordeaux mixture—4 pounds sulphate of copper, 5 pounds lime, and 4 ounces of green arsenoid, to 50 gallons of water. I thoroughly saturated the trees, every portion, until the mixture dropped from them. I saw no ill effect. The trees so treated had more fruit on them than any other six trees adjoining them that were not sprayed until after blooming. One seedling was so full that I had to take off more than half the fruit."

And there were no bees there to fertilize the bloom, and it was too early in the season for other insects to be out; if any had chanced to have been there such a dose would most likely have killed them.

It will be noted that "green arsenoid"—a virulent poison—was added to the usual formula for Bordeaux mixture, and that the writer simply states facts, and does not claim that the spraying in bloom was the cause of there being no fruit on them; he leaves us to our own conclusions. But such evidence ought to go a long way to establish the truth that the "poison" does not injure the pollen, or spraying in bloom prevent a crop of fruit. This witness is thoroughly reliable, and one of the most intelligent, up-to-date, successful fruit-growers in this country. It may require further investigation and experiments to settle this matter fully.

Ontario, Canada. **THADDEUS SMITH.**

[All the same, it is good advice *not* to spray while in bloom. Good crops of fruit have been secured when no spraying at all had done.—EDITOR.]

### Only a 2 Percent Loss.

Bees have wintered with a 2 percent loss of colonies, and perhaps 10 percent of the remainder will require careful handling to build them up in shape for the white clover honey-flow.

Ontario, Canada, April 14. **MORLEY PETTIT.**

### Plenty of Rain.

Bees are doing well here. We have had plenty of rain to insure a good honey crop. My bees are working on the fruit-bloom and gathering some honey from filaree. White sage will soon blossom.

This is my second year with bees. I built up my apiary last year, and have now 52 colonies, spring count.

I have the bee-fever pretty strong. I am running for both extracted and comb honey.

**EUGENE DUMAS.**  
San Bernardino Co., Calif., April 10.

### Report for 1901.

I have kept bees for about 30 years, on a 100-acre farm. I never had a bee-book or a bee-paper, the American Bee Journal being the first one I have taken.

I have been very happy in bee-keeping. My apiary now consists of 49 colonies. I had 30 colonies last year, spring count, from which I secured 8500 pounds of extracted honey; half of the lot I sold for 7 cents per pound, and the rest for 8 cents, without any cans. I in-

To make cows pay, use Sharples Cream Separators. Book Business Dairying & Cat. 212 free. W. Chester, Pa.

## Headquarters

—FOR—

## Beekeepers Supplies

**Root's Goods at Root's Factory Prices**

Distributor of same for THE SOUTH, TENNESSEE, KENTUCKY, WEST VIRGINIA, ILLINOIS and OHIO.

Complete stock for 1902 now on hand. The freights from Cincinnati are the lowest.

Prompt service is what I practice. Satisfaction guaranteed.

Catalog mailed free—send for same. The Standard Honey-Jars, Langstroth Hives, etc., at lowest prices.

You will save money by buying from me.

Orders taken for QUEENS—GOLDEN ITALIANS, RED CLOVER QUEENS, and CARNIOLANS. For prices I refer you to my catalog.

## C. H. W. WEBER,

2146-2148 Central Ave., CINCINNATI, OHIO.  
Successor to Chas. F. Muth & Son and A. Muth.  
Please mention Bee Journal when writing.



PAGE

## BE PRACTICAL

Buy the fence that has stood the test of time. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

Please mention Bee Journal when writing.

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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3/4 miles apart, and mated to select drones. No bees owned within 2 1/2 miles; none impure within 3, and but few within 5 miles. No disease. 29 years' experience. **WARRANTED QUEENS.** 75 cents each; **TESTED, \$1.50 each.** Discount on large orders. 300 tested reared last season ready to-day. Contracts with dealers a specialty. Discount after July 1st. Send for circular.

### JOHN M. DAVIS,

14A26t **SPRING HILL, TENN.**  
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**Nucleus Colonies, Queens, Strawberry Plants.** American Bee Journal and Tested Queen, \$1.50. Circular free.

### J. F. MICHAEL,

14A4t **R. R. 6, WINCHESTER, IND.**  
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## \$300,000,000.00 A YEAR

and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

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## Bees For Sale.

75 colonies in Improved Dovetailed Hives, in lots to suit purchaser.

### O. H. HYATT,

13Atf **SHENANDOAH, Page Co., IOWA.**  
Please mention Bee Journal when writing.



creased to 50 colonies. I have always wintered my bees in the cellar, with a temperature from 48 to 50 degrees. I put them in the cellar in good condition and plenty of winter stores. I have never lost a colony during the winter.

We had a fine day yesterday, and put the bees out, but to-day we had a big snow-storm, and put the bees into the cellar again.

THEODORE STEGER.  
Washington Co., Wis., April 7.

### Bees Wintered Well.

I have been interested in the reports published in the American Bee Journal. I put 48 colonies in last fall, and took out 48 all right this spring. One year ago I took out 25 colonies. I kept them from swarming all I could by cutting out drone-comb, or cutting the heads off. I fed two sacks of sugar in April and May, and got the bees ready for business when clover came into bloom. I got 2150 pounds, mostly comb honey, which I sold at home at 13 cents per pound.

I had no ventilation to the bee-cellar, only as I might open the door from the rest of the cellar where I kept the vegetables, but I found the bees got quite uneasy, and I took them out a week earlier than usual this year.

WM. CLEARY.  
Kossuth Co., Iowa, April 7.

### CONVENTION NOTICE.

Illinois.—The Eastern part of the Northern Illinois Bee-Keepers' Association will hold their spring meeting at the residence of O. J. Cummings, 2½ miles northeast of Rockford, Ill., Tuesday, May 20, 1902. All interested in bees are invited to attend. B. KENNEDY, Sec.



### Light as a Feather.

This is a grand motto for the cook and the baking powder man, but Rural Mail Boxes are a different proposition. You don't want them too easily digested. Father Time makes short work of the light ones, but our "Uncle Sam's Favorite" is our gain. However, "his loss is our gain." See?

BOND STEEL POST CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

## Queens

Either 3 or 5 Banded, from the best strains in this country. Un-tested, 85 cents each; \$9. per dozen. Tested, \$1.25 each.

I make a specialty of Queen-Rearing, and fill orders promptly. Remit by Post-office Money order to

DANIEL WURTH,

CARYVILLE, TENN.

16E2t (I have moved from Coal Creek.)



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One in each town to ride and exhibit a sample 1902 Bicycle.

1902 Models, \$9 to \$15

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### 1902—Bee-Keepers' Supplies!

We can furnish you with The A. L. Root Co.'s goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for beeswax. Send for our 1902 catalog. M. H. HUNT & SON, Bell Branch, Wayne Co., Mich

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40 colonies of Hybrid Bees, all in Dovetailed Hives, on 8 self-spacing Hoffman Frames. One to 10 colonies, \$3.00 per colony; 10 or more, \$2.50 per colony. One super goes with each hive. All bees guaranteed to arrive safely by express. Address,

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Any kind of Hive.

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That covers the whole Apicultural Field more completely than any other published, send \$1.25 to

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Latter Day Merchandising has many houses in the mail order business, "selling direct to the consumer," and "saving agent's profits." A very large percent of these are themselves taking the agent's profits, having themselves received their goods at second and third hands. Among this smaller class, who in truth and in fact manufacture their own goods and sell directly from the factory to the consumer, is the famous old Elkhart Carriage and Harness Mfg. Co., of Elkhart, Ind. These people handle only goods of their own manufacture, and they have no jobbers, agents, or middlemen. Everything you purchase from them comes directly from their factories. There is no doubt about agent's commissions being avoided in their case. The mammoth proportion to which their business has grown proves that the people realize that there is a great saving to them in dealing direct with this firm. Every kind of light vehicle and harness is in their line. They publish a large illustrated catalog which our readers should have. They will be pleased to mail it to any one writing for it. Please mention the American Bee Journal when asking for the catalog.

## SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb.	10lb.	25lb.	50lb.
Sweet Clover (white)....	\$.75	\$1.40	\$3.25	\$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover .....	1.00	1.80	4.25	8.00
White Clover .....	1.00	1.90	4.50	8.50
Alfalfa Clover .....	.80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.

144 & 146 Erie Street, CHICAGO, ILL.

## HONEY AND BEESWAX

### MARKET QUOTATIONS.

CHICAGO, Apr. 18.—The season in which comb honey sells prior to the new crop is now practically at an end; therefore prices are more or less irregular, as some sections in a case will be grained more or less and others free. The best lots of basswood and clover sell at 14@15c; other kinds of white at 10@13c; ambers are not in heavy supply and sell at 9@12c. Extracted is dull at 5@6½c for white, and 5@6c for amber, depending upon flavor and other qualities. Beeswax scarce at 32c. R. A. BURNETT & Co.

CINCINNATI, March 6.—The market in extracted honey is good with prices lower. Amber, for manufacturing purposes, brings from 5½@6½c; better grades from 7@8c. Fancy comb honey sells at 16c; lower grades hard to sell at any price. Beeswax strong at 27@30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 21.—Our market has not been so empty of comb honey in a long time. Fancy white comb, 15@16c; No. 1, 15c; dark and buckwheat, 13@14c. Extracted, buckwheat, 6c. Beeswax, 30c. H. R. WRIGHT.

BOSTON, March 20.—The demand for comb honey remains good. Market ranges as follows: Fancy white, in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c; honey in glass-front cases about one cent less. Extracted, California light amber, 7@7½c; Florida honey, in barrels, 6@6½c. BLAKE, SCOTT & LEE.

DETROIT, Apr. 8.—Fancy white comb honey, 15c; No. 1, 13@14c; dark and amber, 11@12c. Extracted, white, 6½@7c; dark and amber, 5@6c. Beeswax, 29@30c. M. H. HUNT & SON.

CINCINNATI, Apr. 11.—Stock of comb honey here is larger than it ought to be at this time of the year, and this is why it is offered for very low figures. Water-white is sold at 14@14½c and hard to obtain; for extra fancy, 15c.

Extracted finds a steady sale, and amber is sold in barrel lots for 5@5½c; water-white alfalfa sells from 6@6½c, and white clover brings from 6½@7c. Beeswax scarce at 30c.

C. H. W. WEBER.

NEW YORK, Apr. 7.—Comb honey, last year's crop, practically cleaned up, but as we wrote a little while ago we had received new crop from Cuba, and are now receiving new crop from the South. Demand is fair at 14c for fancy white, 13c for No. 1, 12c for No. 2, and 10@11c for amber.

Extracted: The market is decidedly dull. Very little demand, with large stocks on hand, some of which no doubt will have to be carried over, and indications point to a further decline in prices. We quote: White, 6c; light amber, 5½c; amber, 5c; Southern, 5¼@5½c per gallon according to quality. Even these prices are shaded in car lots. Beeswax, scarce and firm at 29@30c. HILDETH & SEIGLER.

BUFFALO, March 28.—Buffalo is very quiet on honey, except very low grades at very low prices. We quote extra fancy, 4c; No. 1, 12@13c; other grades, 8@10c. Extracted, 5@6c. Beeswax scarce; fancy, 28@30c; dark, 22@25c. BATTERSON & Co.

SAN FRANCISCO, Apr. 9.—White comb, 10@12½ cents; amber, 7@10c; dark, 6@7 cents. Extracted, white, 5@—; light amber, 4¼@—; amber, 4@—; Beeswax, good to choice, light, 26@28c; dark, 24@25c.

Advices from the interior of this State indicate a big yield of honey this year and an early season. While quotable values remain in about the same position as last noted, the market cannot be termed firm. Buyers are operating lightly, anticipating easier values when new crop begins to arrive freely.

WANTED. EXTRACTED HONEY—either large or small lots; parties having same to offer, send samples, and best prices delivered at Cincinnati, Ohio. We pay cash on delivery. THE FRED W. MUTH CO.

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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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**Langstroth on the Honey-Bee—Revised,**

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**HIVE**

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Walter S. Ponder, Indianapolis, Ind.  
Jos. Nysewander, Des Moines, Iowa.  
Jno. Nebel & Son, High Hill, Montgomery Co., Mo.  
Prothero & Arnold, Du Bois, Clearfield Co., Penn.  
Carl F. Buck, Augusta, Butler Co., Kan.  
W. W. Cary & Son, Lyonsville, Mass.  
The L. A. Watkins Mds. Co., Denver, Colo.

Would you increase your profits? Then try the Danz. Hive. It's used from Maine to California. Read the following:

MECHANIC FALLS, MAINE, Feb. 28, 1902.  
THE A. I. ROOT COMPANY, Medina, Ohio.

GENTLEMEN:—I am VERY, VERY pleased that you are willing I should recommend the Danz. hive. I have had a great many inquiries regarding it, and have not felt at liberty to recommend it over our regular hives. At first I was prejudiced against it, but the sales have increased without recommendations, and wherever I have sold they have bought again and praised the hive with extravagant claims, and I am forced to the conclusion that it is the BEST COMB-HONEY HIVE on the market.  
J. B. MASON,  
Manager North-eastern Branch The A. I. Root Co.

The above unsolicited testimonial speaks for itself.

M. H. Mendleson, of California, has just ordered 700 Danzenbaker supers. Sales are doubling every year. Still the demand for honey-in Danz. sections is greater than the supply. If you are wise you will raise comb honey in Danz. hives.

**THE A. I. ROOT CO.,**  
MEDINA, OHIO, U.S.A.

**GEORGE W. YORK & CO.,** 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.